

**IN THE CLAIMS:**

Please substitute the following claims for the same-numbered claims in the application:

1. (Cancelled).
2. (Previously Presented) The method in claim 4, wherein said repair comprises forwarding said data packet to a node to which a failed node would have forwarded said data packet.
3. (Previously Presented) The method in claim 4, further comprising modifying said header as said data packet is distributed down said distribution tree to remove encoded information concerning upper distribution levels of said distribution tree.
4. (Previously Presented) A method of stateless group communication and repair of data packets to nodes in a distribution tree, said method comprising:
  - encoding said distribution tree to produce an encoded distribution tree;
  - creating a header including said encoded distribution tree;
  - adding said header to a data packet to be distributed to said distribution tree; and
  - modifying said header as said data packet is distributed down said distribution tree to repair said distribution tree, wherein said repair comprises decoding a portion of said encoded distribution tree as a node receives said data packet and re-encoding said

encoded distribution tree as said node passes said data packet to another node down said distribution tree.

5. (Previously Presented) The method in claim 4, wherein said distribution tree controls the order in which said nodes receive said data packets.

6. (Original) The method in claim 5, wherein by controlling the order in which said nodes receive said data packets, said encoded distribution tree permits said nodes to process said data packets upon receipt.

7. (Previously Presented) The method in claim 4, further comprising, prior to said encoding process, creating said distribution tree at a sender node based upon a dynamic group of receiver nodes.

8. (Previously Presented) The method in claim 4, wherein said encoding comprises sequentially entering addresses of nodes during a per-level traversal of said distribution tree starting from the root of said distribution tree.

9. (Cancelled).

10. (Previously Presented) The method in claim 12, wherein said modifying forwards said data packet to a node to which said failed node would have forwarded said data packet.

11. (Previously Presented) The method in claim 12, wherein said modifying comprises modifying said header as said data packet is distributed down said distribution tree to remove encoded information concerning upper distribution levels of said distribution tree.

12. (Previously Presented) A method of stateless group communication of data packets to nodes in a distribution tree, said method comprising:  
encoding said distribution tree to produce an encoded distribution tree;  
creating a header including said encoded distribution tree;  
adding said header to a data packet to be distributed to said distribution tree;  
detecting failed nodes down said distribution tree;  
modifying said header as said data packet is distributed down said distribution tree to skip said failed node and remove said failed node from said encoded distribution tree, wherein said modifying comprises decoding a portion of said encoded distribution tree as a node receives said data packet and re-encoding said encoded distribution tree as said node passes said data packet to another node down said distribution tree.

13. (Previously Presented) The method in claim 12, wherein said distribution tree controls the order in which said nodes receive said data packets.

14. (Original) The method in claim 13, wherein by controlling the order in which said nodes receive said data packets, said encoded distribution tree permits said nodes to process said data packets upon receipt.

15. (Previously Presented) The method in claim 12, further comprising, prior to said encoding process, creating said distribution tree at a sender node based upon a dynamic group of receiver nodes.

16. (Previously Presented) The method in claim 12, wherein said encoding comprises sequentially entering addresses of nodes during a per-level traversal of said distribution tree starting from the root of said distribution tree.

17. (Cancelled).

18. (Previously Presented) The method in claim 20, wherein said modifying forwards said data packet to a node to which said failed node would have forwarded said data packet.

19. (Previously Presented) The method in claim 20, wherein said modifying comprises said header as said data packet is distributed down said distribution tree to remove encoded information concerning upper distribution levels of said distribution tree.

20. (Previously Presented) A method of stateless group communication of data packets to nodes in a distribution tree, said method comprising:

- encoding said distribution tree to produce an encoded distribution tree;
- creating a header including said encoded distribution tree;
- adding said header to a data packet to be distributed to said distribution tree;
- detecting failed nodes down said distribution tree;
- modifying said header as said data packet is distributed down said distribution tree to pass said data packet around said failed node, wherein said modifying comprises decoding a portion of said encoded distribution tree as a node receives said data packet and re-encoding said encoded distribution tree as said node passes said data packet to another node down said distribution tree.

21. (Previously Presented) The method in claim 20, wherein said distribution tree controls the order in which said nodes receive said data packets.

22. (Original) The method in claim 21, wherein by controlling the order in which said nodes receive said data packets, said encoded distribution tree permits said nodes to process said data packets upon receipt.

23. (Previously Presented) The method in claim 20, further comprising, prior to said encoding process, creating said distribution tree at a sender node based upon a dynamic group of receiver nodes.

24. (Previously Presented) The method in claim 20, wherein said encoding comprises sequentially entering addresses of nodes during a per-level traversal of said distribution tree starting from the root of said distribution tree.

25. (Cancelled).

26. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 28, wherein said modifying forwards said data packet to a node to which said failed node would have forwarded said data packet.

27. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 28, wherein said modifying comprises modifying said header as said data packet is distributed down said distribution tree to remove encoded information concerning upper distribution levels of said distribution tree.

28. (Previously Presented) A computer readable medium embodied with a computer program to perform a method of extracting circuit characteristics from a circuit design, said method comprises establishing transmission headers for stateless group communication of data packets to nodes in a distribution tree, said method comprising:

encoding said distribution tree to produce an encoded distribution tree;

creating a header including said encoded distribution tree;

adding said header to a data packet to be distributed to said distribution tree;

detecting failed nodes down said distribution tree;

modifying said header as said data packet is distributed down said distribution tree to skip said failed node and remove said failed node from said encoded distribution tree, wherein said modifying comprises decoding a portion of said encoded distribution tree as a node receives said data packet and re-encoding said encoded distribution tree as said node passes said data packet to another node down said distribution tree.

29. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 28, wherein said distribution tree controls the order in which said nodes receive said data packets.

30. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 29, wherein by controlling the order in which said nodes receive said data packets,

said encoded distribution tree permits said nodes to process said data packets upon receipt.

31. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 28, further comprising, prior to said encoding process, creating said distribution tree at a sender node based upon a dynamic group of receiver nodes.

32. (Currently Amended) The ~~program storage device~~ computer readable medium in claim 28, wherein said encoding comprises sequentially entering addresses of nodes during a per-level traversal of said distribution tree starting from the root of said distribution tree.